


Brooks Environmental
Consulting, LLC

9 Isaac Street
Norwalk, CT
06850

Phone: 203-853-9792
Fax: 203-853-0273
www.brooksenviro.com

February 18, 2013

Ms. Kimberly N. Tisa
Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code: SORR07-2
Boston, MA 02109-3912

**RE: Performance-Based Work Plan for
PCB-Containing Caulk and Window Glazing
Associated with Additions & Alterations to
Stadley Rough Elementary School
25 Karen Road
Danbury, Connecticut**

Dear Ms. Tisa:

Brooks Environmental Consulting is submitting the enclosed Self-Implementing Plan on behalf of the City of Danbury, Connecticut.

The objective of this plan is to deal with PCB-containing caulk and window glaze putty that will be disturbed by construction work. Rather than a risk-based approach to disposal, the City has decided to use performance-based disposal. The amount of material involved is small.

Should you have any questions regarding this plan, please contact me via mail or email at mark.granville@brooksenviro.com. We look forward to your review and approval of this plan.

Sincerely yours,



Mark F. Granville
Senior Consultant

enclosures

cc: Gary Trombley, CT Department of Environmental Protection
Farid Khouri, City of Danbury
MG120058



9 Isaac Street
Norwalk, CT
06850

Phone: 203-853-9792
Fax: 203-853-0273
www.brooksenviro.com

Self-Implementing Plan for On-Site Cleanup and Disposal of PCB Caulking Associated with Additions and Alterations to

Stadley Rough Elementary School
25 Karen Road
Danbury, Connecticut

February 6, 2013
rev: 2/18/2013

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1. Inspection Report – Limited PCB Testing of Caulk and Putty Associated with Additions & Alterations to Stadley Rough Elementary School, February 6, 2013, rev: 2/18/2013
2. Drawing RM1.1
3. Technical Specification Sections 01 11 13, 02 08 50

1 Introduction

1.1 Background

Brooks Environmental Consulting was contracted by the City of Danbury, Connecticut to perform sampling of suspect materials associated with materials that may be disturbed by a planned addition and alteration project at Stadley Rough Elementary School, 25 Karen Road, Danbury, Connecticut. Figure 1 shows the street location of the school.

The facility is a two-level steel and masonry structure. The lower level is currently used only for storage and maintenance. The original building, which constitutes most of the structure, was constructed in 1971. Additions and renovations were carried out in 1991.

The inspection scope was determined by meetings with Kaestle Boos Associates, Inc., project architects on November 28, 2012 and January 29, 2013. It was determined that the scope of work with respect to possible PCB-containing caulk and putty is limited to one classroom window unit, one exterior door, and the cafeteria exterior windows. Figure 2 shows the construction key plan.

1.2 Plan Objectives

The objective of this self-implementing plan is to remove, handle, and dispose of PCB-containing materials that will be disturbed during the project in compliance with Federal regulations and State of Connecticut regulations in a straight-forward and simple manner. It is not the intent of the City of Danbury to abate or remediate all PCB-containing caulk and putty materials that may be present in the building.

2 Material Characterization

2.1 Sample Collection and Analysis

A copy of the PCB inspection report is attached to this plan. It contains a summary of the sampling performed to delineate the nature and extent of PCB, the procedures used to sample materials and adjacent surfaces, and the laboratory analytical reports.

2.2 Sample Analysis Results

PCB concentrations exceeding 50 ppm (58 ppm average) were found in the glazing putty of the cafeteria windows. This material contacts the window glass and sash and does not contact any masonry or wall surface. Caulk between the window frames and masonry wall does not contain detectable amounts of PCB.

PCB concentrations less than 50 ppm (3.2 ppm average) were found in the interior door frame caulk. This material is applied between two sections of the metal door frame and does not contact any masonry or wall surface.

PCB concentrations less than 50 ppm (2.1 ppm average) were found in the classroom window frame caulk. This material is in contact with cement block. Testing of the cement block did not find detectable levels of PCB.

Construction Drawing RM1.1 [Regulated Materials, PCB & Asbestos] is attached to this plan. It shows the locations of these materials along with the analytical results for PCB and asbestos. It should be noted that the cafeteria glaze putty also contains asbestos.

3 Work Plan

The work described in this plan is limited to the materials listed above as shown on Drawing RM1.1. Remediation work will be performed to ensure compliance with EPA and State of Connecticut requirements and to protect both public health and the environment. Materials will be properly disposed in compliance with federal and state regulatory requirements.

The proposed activities to be performed by the Remediation Contractor will include, but are not limited to, the following:

1. Site preparation and controls to facilitate remediation of PCBs.
2. Health and Safety in accordance with Occupation Safety and Health Administration (OSHA) requirements.
3. Recordkeeping and distribution as required by regulations.

The following materials will be removed and be disposed as PCB Bulk Product Waste / PCB Bulk Remediation Waste:

1. Cafeteria window glass/sash units with glaze putty.
2. Exterior door frame with brown/rubbery caulk.
3. Classroom 3 window frame and dark brown/yellow paint caulk.

The following materials will be disposed as construction debris:

1. Cafeteria window frames.
2. Exterior doors.
3. Classroom 3 window sash and glass.

Brooks Environmental Consulting LLC will monitor remediation activities as the Owner's representative.

Site restoration will be performed by the project general trades' contractor under separate contract following PCB/asbestos remediation.

Prior to remediation activities, site preparation and controls will be established. PCB Bulk Product / Bulk PCB Remediation Waste will be removed and transported off-site for disposal at a permitted hazardous waste landfill which is approved for mixed PCB and asbestos waste.

3.1 Site Preparation and Controls

The work will be performed in accordance with the attached technical specification sections. Prior to initiating PCB Removal, the following site controls will be implemented:

- Remediation Contractor will prepare a site specific work plan as detailed in specification section 02 82 50.
- Remediation Contractor will prepare a Health & Safety Plan (HASP) developed specific to the site and work activities to be performed. All workers will follow applicable federal and state regulation with regard to work activities, including but not limited to OSHA regulations for personal protection and respiratory protection.
- The project site will be enclosed by a temporary construction fence. During all remediation activities, Remediation Contractor will maintain control of all entrances and exits to the project site to ensure only authorized personnel enter the work areas and are afforded proper personal protective equipment and, as required, respiratory protection.

All approaches to work areas will be demarcated with appropriately worded warning signs.

- Work zones will be established in accordance with the technical specification to include abatement zone, decontamination zone and support zone.
- Ground protection to prevent debris from escaping the abatement zone and to protect areas outside of abatement zone from PCB contamination will be utilized. Protection will include the use of water impervious membrane covering which will be secured to the ground surface. Edges will be raised to prevent water run-off used for dust control during cutting and demolition of structures. The membrane will be covered with a single layer of 6-mil polyethylene sheeting securely fastened to foundation.
- Isolation barriers will be installed on interior side of window or door systems to isolate these systems to the building exterior where work will be performed.

3.2 Removal Procedures

PCB Bulk Product / PCB Bulk Remediation Waste Materials will be handled and removed from specified locations for proper disposal. Materials will be removed in a manner which does not breakdown the materials into fine dust or powder to the extent feasible. Equipment and tools to be utilized will include hand tools and mechanical equipment such as demolition hammers. Mechanical removal equipment will, as appropriate, be fitted with dust collection systems. Any dry or brittle caulking materials or other PCB Bulk Product waste will be removed with additional engineering controls such as use of a HEPA vacuum to remove accumulated dust or debris. Once removed, materials will be placed in lined containers or into appropriate temporary containers such as 6-mil polyethylene disposal bags for controlled transport to PCB waste containers at the end of each work shift.

The use of minimal quantities of water to moisten the generated dust prior to collection will be utilized. Under no circumstances will the PCB-containing materials or waste show evidence of free liquid water or pooling within the waste stream. Any liquid used to wet the dust and debris to control fugitive emissions will be collected and disposed of as PCB Liquid Waste. All rags and other cleaning materials used to clean will also be properly disposed as PCB Remediation Waste.

Post testing verification sampling will be performed after visual inspection has verified removal and cleaning.

3.3 Verification Sampling

Upon completion of work in each area, a visual inspection of all remediated surfaces for visible evidence of dust and debris will be performed. Surfaces will also be inspected for visible PCB source materials that may not have been removed. The visual inspection will provide, in a preliminary way, verification that remediation work has been completed. In addition to the remediated surfaces, the surfaces of protective coverings and isolation barriers will be inspected to ensure they are cleaned of dust and debris. No sampling will be performed until the visual inspection is complete.

3.3.1 Interior Floor Surfaces

Window and door systems will be isolated to the building exterior with containment barriers prior to conducting removal of systems. All materials including frames, glass, and glazing compounds will be removed from the exterior of the building. Upon completion of the work and subsequent cleaning of the containment barriers, the barriers will be removed and the finish floor surfaces cleaned. Once cleaned, wipe samples will be collected for verification of cleaning. Wipe sampling methods will be performed and will be compared to the State of Connecticut Department of Public Health and EPA recommended limit of $<1 \mu\text{g}/100 \text{ cm}^2$. One wipe sample will be collected on the

floor in the area outside the containment barrier and a second wipe sample will be collected 2 feet inside the containment barrier location. An estimated total of six samples for verification will be collected along with one blank sample and one duplicate samples.

4 Schedule and Plan Certification

It is the intent of the City of Danbury to perform the regulated materials work during Summer 2013. No regulated material work will be performed while school is in session. Other work will occur in accordance with the overall construction plan. It is anticipated that the work will be performed as expeditiously as possible. Upon completing removal of the Bulk PCB Bulk Product / PCB Bulk Remediation Waste and verification sampling confirming the Project Objectives are met, the construction project will commence.

The Owner hereby certifies that all the inspection reports are on file at Danbury City Hall, Engineering Department, 155 Deer Hill Avenue, Danbury, Connecticut and are available for EPA inspection.

Farid Khouri, PE
City Engineer
City of Danbury

Date _____

Mark F. Granville
Senior Consultant
Brooks Environmental Consulting LLC

Date _____

Regulated Materials Remediation Contractor
[to be determined]

Date _____

FIGURE 1

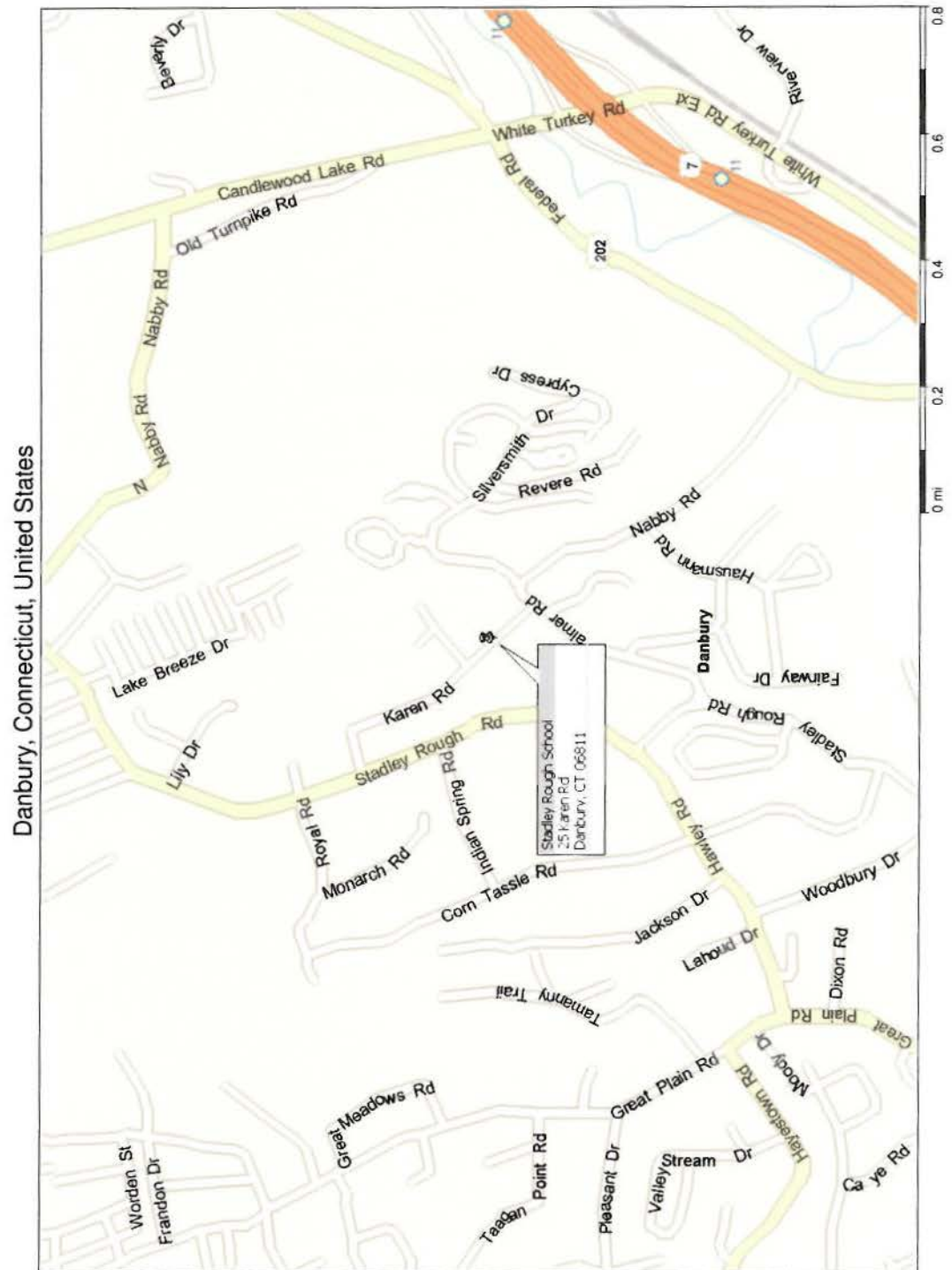
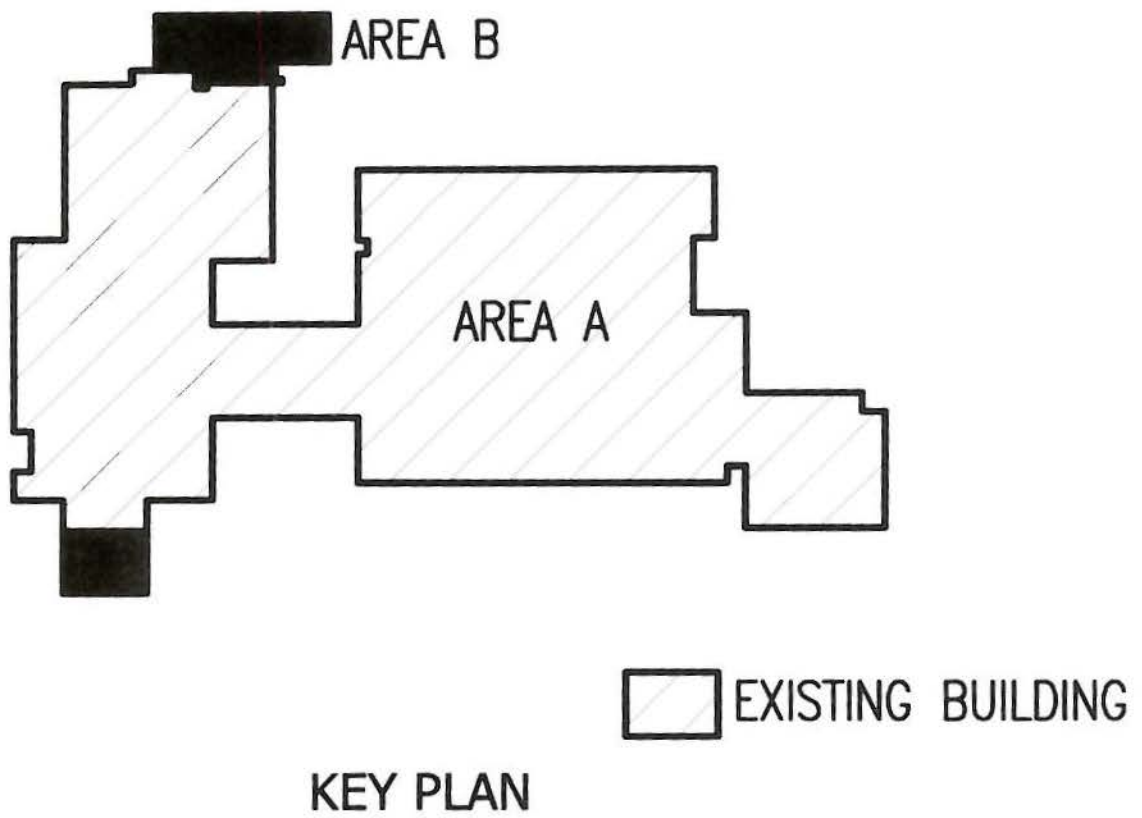


FIGURE 2





9 Isaac Street
Norwalk, CT
06850

Phone: 203-853-9792
Fax: 203-853-0273
www.brooksenviro.com

LIMITED PCB TESTING OF CAULK AND PUTTY ASSOCIATED WITH

Additions & Alterations to

Stadley Rough Elementary School
25 Karen Road
Danbury, Connecticut

February 6, 2013
rev: 2/18/2013

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Narrative Summary

Brooks Environmental Consulting was contracted by the City of Danbury, Connecticut to perform sampling of caulk and putty associated with windows and doors that may be disturbed by a planned addition and alteration project at Stadley Rough Elementary School, 25 Karen Road, Danbury, Connecticut. The inspection scope was determined by meetings with Kaestle Boos Associates, Inc., project architects on November 28, 2012 and January 29, 2013 and was limited to one exit door, one classroom window, and the cafeteria windows. Sample collections were carried out by Mark Granville and Michael Zubarev November 30, 2012, January 23, 2013, and January 30, 2013.

The facility is a two-level steel and masonry structure. The lower level is currently used only for storage and maintenance. The original building, which constitutes most of the structure, was constructed in 1971. Additions and renovations were carried out in 1991.

PCB concentrations exceeding 50 ppm were found in the glazing putty of the cafeteria windows. This material contacts the window glass and sash and does not contact masonry in which the window frames are mounted. PCB concentrations less than 50 ppm were found in door frame caulk that does not contact masonry in which the door frame is mounted and in window frame caulk that does contact building masonry. This masonry tested below the detection limit for PCB.

A table of test results will be found on page 5.

Sample logs and laboratory reports are attached to the end of this report.

Sampling Protocols

A visual inspection was performed in the project areas to determine suspect materials. Samples were collected from each area and were sent to Spectrum Analytical, Agawam, Massachusetts in sealed containers for extraction by SW846 method 3540C and analysis by SW846 method 8082.

Each sample was assigned an identifier by the inspector. The color and physical condition (brittle, pliable, soft, etc.) were recorded.

Caulk and Putty

Samples of glazing putty were generated by using a disposable knife blade passed along the window sash with the point on the glass. The resulting powder was collected using a length of aluminum foil placed on the window sill. The powder was then transferred to a sealed container. A new length of foil was used for each sample and the cutting blade was discarded after each sample.

The method of collecting caulk samples differed for brittle versus pliable materials. In both cases, approximately two cubic centimeters of material was collected. A one-inch wide sharp wood chisel was used to "break-off" pieces of brittle material. Care was taken not to allow pieces to fall to the ground. The chisel was cleaned with three hexane wipes used in succession between each sample collection. Pliable material was cut using a disposable knife blade passed along the window or door frame. The cutting blade was discarded after each sample.

Masonry

Representative samples of brick and concrete were collected following procedures adopted from the document "*Standard Operating Procedure for Sampling Porous Surfaces for Polychlorinated Biphenyls (PCBs)*", Revision 4, 5/05/11, The Office of Environmental Measurement and Evaluation, EPA New England – Region 1, North Chelmsford, Massachusetts.

A one-half inch diameter carbide masonry bit and battery-powered rotary impact hammer were used to bore one-half inch deep holes in masonry immediately adjacent to caulking (within one-eighth inch of caulk but not impacting caulk or caulk residue). The resulting powder was collected on an aluminum foil tray and was transferred to a sealed container. Foil trays were discarded after each use and a fresh tray was used for each sample. The carbide bit was cleaned with three hexane wipes used in succession between each sample collection.

Stadley Rough Elementary School, 25 Karen Road, Danbury, CT
Table of PCB sample results

Type of Material	Location	Sample #	PCB (ppm)	Description
door frame caulk	room 4 area, interior	1A,B	3.2	brown, rubbery
door frame caulk	room 4 area, exterior	2A,B	0.0	brown, rubbery
window frame caulk	cafeteria, exterior	5A,B	0.0	gray, rubbery
window frame caulk	room 3, exterior	STR-1A,B	0.0	light gray, rubbery
window frame caulk	room 3, interior	STR-2A,B	2.1	dark brown/yellow paint
window glazing	cafeteria	3C	58.0	white/gray, brittle
masonry	room 3, interior	STR-M2A,B	0.0	cinder block/yellow paint

NOTE: A PCB result of 0.0 means that the concentration was below the reportable detection limit. All reportable detection limits were less than 0.2 ppm with most being below 0.1 ppm.



Tuesday, December 11, 2012

Attn: Mr. Mike Zubarev
Brooks Environmental Consulting, LLC
9 Issac Street
Norwalk, CT 06850

Project ID: MG120058
Sample ID#s: BD02469 - BD02474

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller", is written over a light blue horizontal line.

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #MA-CT-007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301